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3. (Cancelled)
4. (Cancelled).
5. (Cancelled).
6. (Cancelled).
7. (Cancelled).
8. (Cancelled).
9. (Cancelled).
10. (Cancelled).
11. (Cancelled).
12. (Previously Presented): A method for identifying at least one test substance that is an antagonist of a human 7 transmembrane receptor (h7TMR), said method comprising the steps of:
 - (a) providing at least one transgenic *C. elegans* whose genome comprises a nucleotide sequence encoding a h7TMR, wherein said h7TMR is expressed in sensory neurons of said transgenic *C. elegans*, and wherein said sensory neurons correlate with behavior, and wherein said transgenic *C. elegans* exhibits a phenotype;
 - (b) contacting said at least one transgenic *C. elegans* with at least one test substance, wherein said at least one test substance is distributed in a medium;
 - (c) determining whether said at least one test substance causes a suppression of said known phenotype in said at least one transgenic *C. elegans*; and
 - (d) identifying said at least one test substance that causes a suppression of said known phenotype in said at least one transgenic *C. elegans* as an antagonist of said human 7TMR.
13. (Cancelled)
14. (Cancelled)

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15. (Previously Presented): The method as claimed in Claim 12, wherein said behavior is volatile chemoattraction, and said sensory neurons are AWA neurons.

16. (Previously Presented): The method as claimed in Claim 12, wherein said behavior is volatile chemorepulsion, and said sensory neurons are AWB neurons.

17. (Previously Presented): The method as claimed in Claim 12, wherein said behavior is water-soluble chemoattraction, and said sensory neurons are chosen from the group of: ASE, ADF, ASG, and ASI neurons.

18. (Previously Presented): The method as claimed in Claim 12, wherein said behavior is water-soluble chemorepulsion, and said sensory neurons are selected from the group consisting of: ASH and ADL neurons.

19. (Previously Presented): The method as claimed in Claim 12, wherein said behavior is dauer formation, and said sensory neurons are selected from the group consisting of: ASI, ASG, and ADF neurons.

20. (Previously Presented): The method as claimed in Claim 12, wherein said behavior is chosen from the group of: thermoattraction and thermorepulsion, and said sensory neurons are AFD neurons.

21. (Previously Presented): The method as claimed in Claim 12, wherein the medium is chosen from the group of: buffer, growth medium, and agar.

22. (Previously Presented): The method as claimed in Claim 12, wherein the medium is a growth medium that comprises a biomolecular separation in a matrix.

23. (Currently Amended): The method as claimed in Claim 12, wherein said matrix is chosen from the group of: agarose and polyacrylamide.